

REMARKS

Claims 67-80, 82-85, and 87-94 were pending in the application. By this Amendment, claims 67, 85, 87-89, 92, and 93 have been amended, and claim 72 has been cancelled. Reexamination and reconsideration of the claims as amended are respectfully requested.

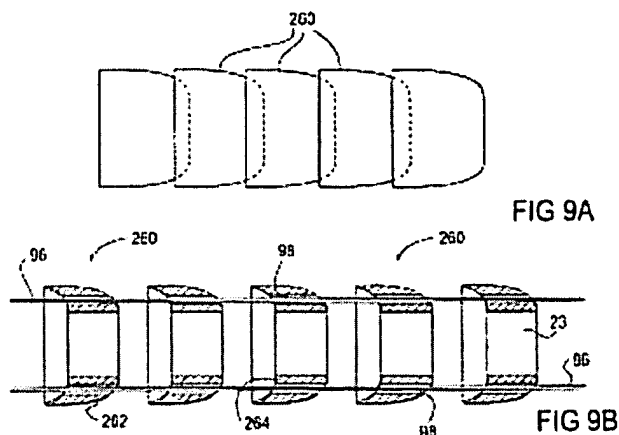
Without acceding to any of the grounds for rejection set forth in the Office Action, Applicants respond as follows.

I. Traversals of Claim Rejections

All claims were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,899,673 to Ogura et al. in view of U.S. Patent No. 3,643,653 to Takahashi et al. Applicants respectfully traverse the rejections of these claims.

The Ogura patent describes an endoscope having two “bending portions” at a distal end of an “elongated insertion portion.” (Ogura, col. 2, ll. 19-29). Each of the “bending portions” is composed of a plurality of “bending pieces 31” that are “concatenated so that the bending pieces can rotate freely.” (Ogura, col. 5, ll. 54-60; Figs. 2, 3A-B). It is these “bending pieces 31” of the Ogura device that are identified in the Office Action as corresponding to the “links” recited in each of claims 67 and 92. It is clear from the Ogura patent, however, that the “bending pieces 31” of the Ogura device are each connected by a hinge to each adjacent “bending piece 31.” This is evident from the shapes of the individual bending pieces shown in the illustration in Figures 3A-B, and from the manner in which the adjacent bending pieces are shown connected to each other by hinges in the illustration in Figure 2. These features of the Ogura device are very different from the devices recited in the pending claims.

For example, amended claim 67 recites an endoluminal apparatus that includes an elongated main body in which a first section of the main body comprises “a plurality of nested links with substantially all adjacent links having mating surfaces that are in contact with but that are not connected to each other.” Support for these features is provided in the specification at, for example, paragraphs 0088-0089, as well as in the drawings in Figures 9A-B, which are reproduced below.



For example, in paragraph 0089, there is the following description of a shaft 20 of an endoluminal system that is made up of nestable elements 260 having distal surfaces 262 and proximal surfaces 264 that coact with one another:

Generally, the adjacent surfaces 262, 264 are contoured to mate so that when the pullwires 96 are relaxed, surfaces 262, 264 can rotate relative to one another. This allows the shaft 20 to form curvatures throughout its length in any direction.

These features are different from the Ogura “bending pieces,” which are connected to each other by hinges that necessarily restrict relative motion between adjacent bending pieces to a single plane of rotation.

The Takahashi patent does not provide any of the subject matter missing from the Ogura patent. Accordingly, because the combination of the Ogura and Takahashi patents does not teach all of the limitations of claim 67, the claim is patentable over those references. For the same reasons, claims 68-71, 73-80, and 82-84, and 94, each of which depends from claim 67, are also patentable.

Turning to claim 92, that claim recites an apparatus including a shaft having at least a first section and a second section, with the first section including a plurality of first links “pivotably abutting each other but not connected to each other, and with substantially each first link having a contoured front surface adapted to engage with a contoured back surface of an adjacent first link.” Support for these features is provided in the same portions of the specification and drawings referenced above in relation to claim 67. Similarly, these features are not taught or disclosed by either of the Ogura or the Takahashi patents. In particular, the

Ogura device includes bending pieces that are each connected to adjacent bending pieces, and that do not have the recited “contoured surfaces.” For at least these reasons, claim 92 is patentable over the combined teachings of the Ogura and Takahashi patents.

Claim 85 recites an apparatus that includes first and second sections that are transformable between a substantially flexible condition and a shape-locked condition

using a tension control mechanism comprising a plurality of tension wires extending through tension wire lumens in said first section and said second section and at least one pulley operably coupled to said plurality of tension wires

Support for these features is provided in the specification, for example, at paragraphs 0122 through 0133, and at Figures 19A-D. The Ogura device does not include the recited tension control mechanism. Instead, the Ogura device includes steering wires (first wires 34 and second wires 35) that are used to pull and bend the bending portions of the endoscope. (Ogura, col. 5, line 52 to col. 6, line 15; Figures 1-2). Ogura does not describe a pulley being coupled to any of the steering wires. Nor does the Takahashi patent provide any of the missing subject matter. For at least these reasons, claim 85 is patentable over the combined teachings of the Ogura and Takahashi patents.

Claim 87 recites an endoluminal apparatus that includes a flexible shaft having first and second sections, and a locking mechanism in the first section for holding the first section in a selected shape:

said locking mechanism comprising a plurality of tension wires extending through tension wire lumens in said first section and said second section and at least one pulley operably coupled to said plurality of tension wires.

Support for these features is provided in the specification, for example, at paragraphs 0122 through 0133, and at Figures 19A-D. The Ogura device does not include the recited locking mechanism. Instead, the Ogura device includes steering wires (first wires 34 and second wires 35) that are used to pull and bend the bending portions of the endoscope. (Ogura, col. 5, line 52 to col. 6, line 15; Figures 1-2). Ogura does not describe a pulley being operably coupled to any of the steering wires. Nor does the Takahashi patent provide any of the missing subject matter. For at least these reasons, claim 87 is patentable over the combined teachings of the Ogura and Takahashi patents. For the same reasons, claims 88-91, each of which depends from claim 87, are also patentable.

Claim 93 recites an endoluminal apparatus that includes a flexible shaft having first and second sections, and a "shape locking means" that is formed in the first section "for holding the first section in a desired shape," with the "shape locking means" comprising:

a plurality of tension wires extending through tension wire lumens in said first section and said second section and at least one pulley operably coupled to said plurality of tension wires

Support for these features is provided in the specification, for example, at paragraphs 0122 through 0133, and at Figures 19A-D. The Ogura device does not include the recited "shape locking means." Instead, the Ogura device includes steering wires (first wires 34 and second wires 35) that are used to pull and bend the bending portions of the endoscope. (Ogura, col. 5, line 52 to col. 6, line 15; Figures 1-2). Ogura does not describe a pulley being operably coupled to any of the steering wires. Nor does the Takahashi patent provide any of the missing subject matter. For at least these reasons, claim 93 is patentable over the combined teachings of the Ogura and Takahashi patents.

Accordingly, Applicants request withdrawal of the rejections of the pending claims, and issuance of a notice of allowance.

Amendment and/or cancellation of certain claims is not to be construed as a dedication to the public of any of the subject matter of the claims as previously presented. Similarly, unless explicitly stated, nothing contained or not contained in this paper should be construed as an assent to any of the Examiner's stated grounds for rejecting the claims, including specifically the Examiner's characterization of the teachings of the cited art. Rather, the present amendments to the claims and Remarks are an attempt to expedite allowance and issuance of the currently pending claims.

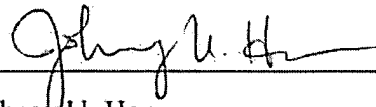
No new matter has been added.

CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejections and pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the appropriate fee and/or petition is not filed herewith and the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, Applicant petitions for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with this filing to Deposit Account No. 50-3973 referencing Attorney Docket No. USGINZ00130. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,



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